National Institute of Environmental Health Sciences

Heatwave early warning systems and adaptation advice to reduce human health consequences of heatwaves

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Abstract:

Introduction: With climate change, there has been an increase in the frequency, intensity and duration of heatwave events. In response to the devastating mortality and morbidity of recent heatwave events, many countries have introduced heatwave early warning systems (HEWS). HEWS are designed to reduce the avoidable human health consequences of heatwaves through timely notification of prevention measures to vulnerable populations. Objective: To identify the key characteristics of HEWS in European countries to help inform modification of current, and development of, new systems and plans. Methods: We searched the internet to identify HEWS policy or government documents for 33 European countries and requested information from relevant organizations. We translated the HEWS documents and extracted details on the trigger indicators, thresholds for action, notification strategies, message intermediaries, communication and dissemination strategies, prevention strategies recommended and specified target audiences. Findings and Conclusions: Twelve European countries have HEWS. Although there are many similarities among the HEWS, there also are differences in key characteristics that could inform improvements in heatwave early warning plans.

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Resource Description

Early Warning System: ☑

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure : ☑

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

Health Impact:

specification of health effect or disease related to climate change exposure

Injury, Other Health Impact

Other Health Impact: heat related morbidity and mortality

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Medical Community Engagement:

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type:

format or standard characteristic of resource

Review

Resilience:

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content